# APPENDIX D

**(VERSION OF CLAIMS AS AMENDED HEREIN WITH MARKINGS TO SHOW CHANGES MADE)**

**(Serial No. 09/944,233)**

## VERSION OF CLAIMS WITH MARKINGS TO SHOW CHANGES MADE

1. (Amended) An apparatus for applying adhesive material to at least one semiconductor component, comprising:

an adhesive reservoir for providing an exposed surface of adhesive material to a defined portion of at least one semiconductor component positioned thereover, said adhesive reservoir comprising at least one pool chamber defined by at least one upward facing opening, said adhesive reservoir shaped such that the exposed surface of adhesive material is supplied to a precise location[ and], said adhesive material having a surface tension; and

at least one mechanism associated with said adhesive reservoir, said at least one mechanism configured to level said exposed surface of adhesive material and maintain said exposed surface of adhesive material at a substantially constant level.

7. (Amended) The apparatus of claim 1, wherein said at least one mechanism comprises a coating stencil including:

a generally flat and generally horizontal top surface; and

a plurality of apertures aligned to wet said defined portion of said at least one semiconductor component with <u>said</u> adhesive material, said plurality of apertures sized and configured to control extrusion of said adhesive material through said coating stencil to increase the exposed surface of said adhesive material.

9. (Amended) The apparatus of claim 7, wherein the plurality of apertures of said coating stencil [are]<u>is</u> substantially rectangular in shape.

10. (Amended) The apparatus of claim 7, wherein the plurality of apertures of said coating stencil [are]<u>is</u> substantially square in shape.

11. (Amended) The apparatus of claim 7, wherein the plurality of apertures of said coating stencil [are]<u>is</u> positioned substantially parallel to each other and [are]<u>is</u> spaced so as to have a centerline pitch between <u>each aperture of said plurality of</u> apertures of .020 inches (.051 cm).

12. (Amended) The apparatus of claim 11, wherein the plurality of apertures of said coating stencil [number]numbers 23 in quantity.

13. (Amended) The apparatus of claim 7, wherein the plurality of apertures of said coating stencil [are]is .260 inches (.660 cm) in length and [are]is .010 inches (.025 cm) in width.

14. (Amended) The apparatus of claim 7, wherein the plurality of apertures of said coating stencil [are]is sized and configured as a result of considering adhesive material viscosity.

15. (Amended) The apparatus of claim 14, wherein the plurality of apertures of said coating stencil [are]is sized and configured to suit an adhesive material viscosity ranging from approximately 1000 to 500,000 centipoise.

16. (Amended) The apparatus of claim 14, wherein the plurality of apertures of said coating stencil [are]is sized and configured to optimally accommodate an adhesive material viscosity of approximately 62,000 centipoise.

17. (Amended) The apparatus of claim 14, wherein the plurality of apertures of said coating stencil [are]is sized and configured to optimally accommodate an adhesive material viscosity of approximately 62,000 centipoise at a temperature of approximately 77° F (25 °C).

18. (Amended) The apparatus of claim 7, wherein the plurality of apertures of said coating stencil [are]is arranged generally parallel to each other and [are]is spaced so as to have a centerline pitch between each aperture of said plurality of apertures of .020 inches (.051 cm).

19. (Amended) The apparatus of claim 18, wherein the plurality of apertures of said coating stencil [number]numbers 23 in quantity.

20. (Amended) The apparatus of claim [7]18, wherein the plurality of apertures of said coating stencil [are]is .260 inches (.660 cm) in length and [are]is .010 inches (.025 cm) in width.

22. (Amended) The apparatus of claim 1, further comprising at least one second mechanism configured to bring said defined portion of at least one semiconductor component in contact with said exposed surface of adhesive material.

24. (Amended) The apparatus of claim 1, wherein said at least one mechanism includes a pump configured to supply said adhesive material to said adhesive reservoir and a control system to control said supply of said adhesive material to said adhesive reservoir [so ]to control extrusion of said adhesive material to a selectable height.

27. (Amended) An apparatus for applying viscous material to at least one semiconductor component, comprising:

a reservoir for providing an exposed surface of viscous material to at least a portion of at least one semiconductor component positioned thereover, said [viscous ]reservoir comprising[ a] at least one pool chamber in fluid communication with [an]a viscous inflow chamber, said at least one pool chamber defined by at least one upward facing opening, said reservoir shaped such that the exposed surface of viscous material is supplied to a precise location, and said viscous material having a surface tension;

at least one first mechanism configured to provide said viscous material to a desired selectable height above said at least one pool chamber; and

at least one second mechanism associated with [viscous]said reservoir, said at least one second mechanism configured to level said exposed surface of viscous material, to maintain said exposed surface of viscous material at a substantially constant level and to increase the effective exposed surface of viscous material.

28. (Amended) The apparatus of claim 27, wherein said at least one first mechanism comprises:

a pump for supplying said viscous material to said reservoir; and

a control system for controlling said supply of the viscous material to said reservoir.

30. (Amended) The apparatus of claim 27, wherein said at least one second mechanism is configured to manipulate said surface tension of the viscous material to flatten out the exposed surface of said viscous material.

34. (Amended) The apparatus of claim 27, wherein said at least one second mechanism comprises at least one coating stencil including:

a generally planar horizontal top surface; and

a plurality of openings positioned to wet said at least a portion of said at least one semiconductor component with said viscous material, said plurality of openings sized and configured to control extrusion of said viscous material through said at least one coating stencil to further increase the exposed surface of said viscous material.

36. (Amended) The apparatus of claim 34, wherein said plurality of openings of said at least one coating stencil [are]is configured to apply said viscous material to only a selected portion of said at least one semiconductor component.

37. (Amended) The apparatus of claim 34, wherein the plurality of openings of said at least one coating stencil [are]is generally rectangular in shape.

38. (Amended) The apparatus of claim 34, wherein the plurality of openings of said at least one coating stencil [are]is generally square in shape.

39. (Amended) The apparatus of claim 34, wherein the plurality of openings of said at least one coating stencil [are]is positioned generally parallel to each other and [are]is spaced so as to have a centerline pitch between each opening of said plurality of openings of .020 inches (.051 cm).

40. (Amended) The apparatus of claim 39, wherein the plurality of openings of said at least one coating stencil [number]numbers 23 in quantity.

41. (Amended) The apparatus of claim 34, wherein the plurality of openings of said at least one coating stencil [are]is .260 inches (.660 cm) in length and [are]is .010 inches (.025 cm) in width.

42. (Amended) The apparatus of claim 34, wherein the plurality of openings of said at least one coating stencil [are]is sized and configured as a result of considering viscous material viscosity.

43. (Amended) The apparatus of claim 42, wherein the plurality of openings of said at least one coating stencil [are]is sized and configured to manage a viscous material viscosity ranging from approximately 1000 to 500,000 centipoise.

44. (Amended) The apparatus of claim 42, wherein the plurality of openings of said at least one coating stencil [are]is sized and configured to optimally accommodate a viscous material viscosity of approximately 62,000 centipoise.

45. (Amended) The apparatus of claim 42, wherein the plurality of openings of said at least one coating stencil [are]is sized and configured to optimally accommodate a viscous material viscosity of approximately 62,000 centipoise at a temperature of approximately 77° F (25 °C).

46. (Amended) The apparatus of claim 34, wherein the plurality of openings of said at least one coating stencil [are]is arranged generally parallel to each other and [are]is spaced so as to have a centerline pitch between each opening of said plurality of openings of .020 inches (.051 cm).

47. (Amended) The apparatus of claim 46, wherein the plurality of openings of said at least one coating stencil [number]numbers 23 in quantity.

48. (Amended) The apparatus of claim 34, wherein the plurality of openings of said at least one coating stencil [are]is .260 inches (.660 cm) in length and [are]is .010 inches (.025 cm) in width.

49. (Amended) The apparatus of claim 34, wherein said at least one first mechanism comprises a vacuum on a bottom side of said at least one coating stencil.